

405 KAR 1:110. Revegetation.

RELATES TO: KRS 350.095, 350.435

STATUTORY AUTHORITY: KRS 350.028

NECESSITY, FUNCTION, AND CONFORMITY: KRS 350.028 requires the Environmental and Public Protection Cabinet to adopt rules and administrative regulations for the strip mining of coal. This administrative regulation sets forth requirements for the revegetation of lands affected by strip mining.

Section 1. General. (1) The permittee shall establish on all land that has been disturbed, a diverse, effective, and permanent vegetative cover of species native to the area of disturbed land or species that will support the planned postmining uses of the land approved according to 405 KAR 1:070. For areas designated as prime farmland, the reclamation procedures of 405 KAR 1:250 shall apply.

(2) Revegetation shall be carried out in a manner that encourages a prompt vegetative cover and recovery of productivity levels compatible with approved land uses. The vegetative cover shall be capable of stabilizing the soil surface with respect to erosion. All disturbed lands, except water areas and surface areas of roads that are approved as a part of the postmining land use, shall be seeded or planted to achieve a vegetative cover of the same seasonal variety native to the area of disturbed land. If both the pre- and postmining land use is intensive agriculture, planting of the crops normally grown will meet the requirement. Vegetative cover will be considered of the same seasonal variety when it consists of mixture of species of equal or superior utility for the intended land use when compared with the utility of naturally occurring vegetation during each season of the year.

(3) On federal lands, the surface management agency shall be consulted for approval prior to revegetation regarding what species are selected, and following revegetation, to determine when the area is ready to be used.

Section 2. Use of Introduced Species. Introduced species may be substituted for native species only if appropriate field trials have demonstrated that the introduced species are of equal or superior utility for the approved postmining land use, or are necessary to achieve a quick, temporary, and stabilizing cover. Such species substitution shall be approved by the cabinet. Introduced species shall meet the applicable state and federal seed or introduced species statutes, and shall not include poisonous or potentially toxic species.

Section 3. Timing of Revegetation. (1) Seeding and planting of disturbed areas shall be conducted during the first normal period for favorable planting conditions after final preparation. The normal period for favorable planting shall be that planting time generally accepted locally for the type of plant materials selected to meet specific site conditions and climate.

(2) Any disturbed areas, except water areas and surface areas of roads that are approved under 405 KAR 1:070 as part of the postmining land use, which have been graded shall be seasonably seeded with a temporary cover of small grains, grasses, or legumes to control erosion until an adequate permanent cover is established.

(3) When rills or gullies, that would preclude the successful establishment of vegetation or the achievement of the postmining land use, form in regraded areas as specified in 405 KAR 1:130, additional regrading or other stabilization practices will be required before seeding and planting.

Section 4. Mulching. (1) Mulch shall be used on all regraded and topsoiled areas to control erosion, to promote germination of seeds, and to increase the moisture retention of the soil. Mulch means vegetation residues or other suitable materials that aid in soil stabilization and soil moisture

conservation, thus providing microclimatic conditions suitable for germination and growth, and do not interfere with the postmining use of the land.

(2) Mulch shall be anchored to the soil surface where appropriate, to ensure effective protection of the soil and vegetation.

(3) Application rates of mulch shall be consistent with those rates submitted on the revegetation plan except as otherwise approved by the cabinet.

(4) Annual grains such as oats, rye and wheat may be used instead of mulch when it is shown to the satisfaction of the cabinet that the substituted grains will provide adequate stability and that they will later be replaced by species approved for the postmining use.

Section 5. Methods of Revegetation. (1) The permittee shall use technical publications or the results of laboratory and field test approved by the cabinet to determine the varieties, species, seeding rates, and soil amendment practices essential for establishment and self-regeneration of vegetation. The cabinet shall approve species selection and planting plans.

(2) Where hayland or pasture is to be the postmining land use, the species of grasses, legumes, browse, trees, or forbs for seeding or planting and their pattern of distribution shall be selected by the permittee to provide a diverse, effective, and permanent vegetative cover with the seasonal variety, succession, distribution, and regenerative capabilities native to the area. Livestock grazing will not be allowed on reclaimed land until the seedlings are established and can sustain managed grazing. The cabinet, in consultation with the permittee and the landowner or in concurrence with the governmental land-managing agency having jurisdiction over the surface, shall determine when the revegetated area is ready for livestock grazing.

(3) Where forest is to be the postmining land use, the permittee shall plant trees adapted to local site conditions and climate. Trees shall be planted in combination with an herbaceous cover of grains, grasses, legumes, forbs, or woody plants to provide a diverse, effective, and permanent vegetative cover with the seasonal variety, succession, and regeneration capabilities native to the area.

(4) Where wildlife habitat is to be included in the postmining land use, the permittee shall consult with appropriate state and federal wildlife and land management agencies and shall select those species that will fulfill the needs of wildlife, including food, water, cover, and space. Plant groupings and water resources shall be spaced and distributed to fulfill the requirements of wildlife.

Section 6. Standards for Measuring Success of Revegetation. (1) Success of revegetation shall be measured on the basis of reference areas approved by the cabinet. Reference areas mean land units of varying size and shape identified and maintained under appropriate management for the purpose of measuring ground cover, productivity and species diversity that are produced naturally. The reference areas must be representative of geology, soils, slope, aspect, and vegetation in the permit area. Management of the reference area shall be comparable to that which will be required for the approved postmining land use of the area to be mined. The cabinet shall approve the estimating techniques that will be used to determine the degree of success in the revegetated area.

(2) The ground cover of living plants on the revegetated area shall be equal to the ground cover of living plants of the approved reference area for a minimum of two (2) growing seasons. The ground cover shall not be considered equal if it is less than ninety (90) percent of the ground cover of the reference area for any significant portion of the mined area. Exceptions may be authorized by the cabinet for:

(a) Previously mined areas that were not reclaimed to the standards required by this chapter prior to May 3, 1978. The ground cover of living plants for such areas shall not be less than required to control erosion, and in no case less than that existing before redistribution.

(b) Areas to be developed immediately for industrial or residential use. The ground cover of living plants shall not be less than required to control erosion. As used in this paragraph, "immediately"

means less than two (2) years after regrading has been completed for the area to be used; and

(c) Areas to be used for agricultural cropland purposes. Success in revegetation of cropland shall be determined on the basis of crop production from the mined area compared to the reference area. Crop production from the mined area shall be equal to that of the approved reference area for a minimum of two (2) growing seasons. Production shall not be considered equal if it is less than ninety (90) percent of the production of the reference area for any significant portion of the mined area.

(3) Species diversity, distribution, seasonal variety, and vigor shall be evaluated on the basis of the results which could reasonably be expected using the methods of revegetation approved under Section 6 of this administrative regulation.

Section 7. Seeding of Stockpiled Topsoil. Topsoil stockpiled in compliance with 405 KAR 1:100 must be seeded or planted with an effective cover of nonnoxious, quick growing annual and perennial plants during the first normal period for favorable planting conditions, or protected by other approved measures. (4 Ky.R. 388; eff. 5-3-78; Am. 486; 5 Ky.R. 199; eff. 8-23-78; TAm eff. 8-9-2007.)